

EX05-004patentin.txt  
SEQUENCE LISTING

<110> EXELIXIS, INC.

<120> ITPKS AS SMODIFIERS OF THE IGFR PATHWAY AND METHODS OF USE

<130> EX05-004C-PC

<150> US60/539,837

<151> 2004-01-28

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<170> PatentIn version 3.2

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## EX05-004patentin.txt

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| aggaccaggt | gccagccact | aagggggggc  | accgccgatg  | ccagggggtt  | tgccccacccg | 1620 |
| ggccccagcg | ttcccagagc | caaattgacac | taacttatag  | aaggggaggg  | ggcaaagggc  | 1680 |
| ttcttcctca | ggccagctct | tctgaggagg  | ctctgccctc  | tccagagggtg | ccagaccgcg  | 1740 |
| gattttat   | agcaagccca | gaccttccgg  | tctaactgtct | cacaccacga  | cggaactcccc | 1800 |
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## EX05-004patentin.txt

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| cctcggcctc | ctccacgggc  | ttctcctcat | cctacgaaga | ctcagaggag  | gacatctcca  | 540  |
| gtgaccctga | gcgcaccctg  | gaccccaact | cagctttcct | gcataccctg  | gaccagcaga  | 600  |
| aacctagagt | gagcaaata   | tggaggaaga | taaaaaacat | ggtgacttgg  | tctcccttcg  | 660  |
| tcattgtcct | caagaagaag  | tacccttgga | tccagctggc | aggacacgca  | gggagtttca  | 720  |
| aggcagctgc | caatggcagg  | atcctgaaga | agcactgtga | gtcagagcag  | cgctgcctgg  | 780  |
| accggctgat | ggtggatgtg  | ctgaggccct | tcgtacctgc | ctaccatggg  | gatgtggtga  | 840  |
| aggacgggga | gcgctacaac  | cagatggacg | acctgctggc | cgacttcgac  | tcgccctgtg  | 900  |
| tgatggactg | caagatggga  | atcaggacct | acctggagga | ggagctcacg  | aaggcccggga | 960  |
| agaagcccag | cctgcggaag  | gacatgtacc | agaagatgat | cgaggtggac  | cccgaggccc  | 1020 |
| ccaccgagga | ggaaaaagca  | cagcgggctg | tgaccaagcc | acggtacatg  | cagtggcggg  | 1080 |
| agaccatcag | ctccacggcc  | accctggggg | tcaggatcga | gggaatcaag  | aaagaagacg  | 1140 |
| gcaccgtgaa | ccgggacttc  | aagaagacca | aaacgagggg | gcaggtcacc  | gaggccttca  | 1200 |
| gagagtccac | taaaggaaac  | cataacatcc | tgatcgccta | tcgggaccgg  | ctgaaggcca  | 1260 |
| ttcgaaccac | tctagaagtt  | tctcccttct | tcaagtgcc  | cgagggtcatt | ggcagctccc  | 1320 |
| tcctcttcat | ccacgacaag  | aaggaacagg | caaagtgtg  | gatgatcgac  | tttgggaaaa  | 1380 |
| ccacgcccct | gcctgagggc  | cagaccctgc | agcatgacgt | cccctggcag  | gaggggaacc  | 1440 |

## EX05-004patentin.txt

|             |             |            |            |            |             |      |
|-------------|-------------|------------|------------|------------|-------------|------|
| gggaggatgg  | ctacctctcg  | gggctcaata | acctcgtcga | catcctgacc | gagatgtccc  | 1500 |
| aggatgcccc  | actcgccctga | gctgcccacg | ccctccctgg | ccccgcctg  | ggcctccttt  | 1560 |
| cctcctcctg  | tgcttccttt  | ctcgttccta | acttttcctt | cacttacacc | tgactgaccc  | 1620 |
| tcctgaactg  | cactacaaga  | cactttgtag | aagaggagat | gagagtttct | agtcattttc  | 1680 |
| ctaacttcag  | ggcttgagg   | tggtgtttgc | actgcttttt | gtagagaggg | tcacctacta  | 1740 |
| gaagagaaat  | gccagtcctt  | agaggtgggt | caggtgtaga | gctggagggg | gtccctggct  | 1800 |
| gctgagggga  | ccctaccaga  | tgagccctgc | ctctgggagc | cccctaggaa | gcaccagcct  | 1860 |
| ggacctacca  | cctgcggagg  | cctgctgccc | cctggcgggc | agtgtctgta | gagtgtctgcc | 1920 |
| aagcacagcc  | ttatttctgc  | cggggcctcc | ccaccggaga | gccagggggg | ccggccgggt  | 1980 |
| tcctggtccc  | tggtgaggag  | cagggctttc | tggtagtgtg | ggcacaaaac | catcggggaa  | 2040 |
| ccacatgttg  | actgtgagca  | aagtgtcttc | cgattagcag | cctcagggat | gccctggtgg  | 2100 |
| cctctccagg  | gctgctcagg  | caaggccccc | caccatctg  | gtatggaaac | ctgccggctc  | 2160 |
| caggccagac  | ccaggagcca  | agagaaggct | gaagccagct | tggtgtgttt | ctctgatcta  | 2220 |
| ggccttccca  | gaggaggcga  | gcagaagctg | tgccacttgg | aattgcaacc | catgagttca  | 2280 |
| gaaggcacac  | tctgccatgc  | tgagctccaa | gggtgctacc | aggggaagat | gggatctata  | 2340 |
| gagtctctgg  | gccctggccc  | cagggaggag | cacatttttc | ttgaccctca | cctacctggt  | 2400 |
| gctagtgttg  | caaccctgcc  | tgcatatcat | ggctcctgtc | atggggccca | gagtcccttg  | 2460 |
| cagatataga  | aataggggag  | gagctcaggt | ctgcgccagg | caggaagaag | gcaggcttct  | 2520 |
| ggcttccaga  | ggtgccgcgg  | tggcctcctg | gcatcatttg | ttattgcctc | tgaaacaagc  | 2580 |
| cttactgcct  | ggagggtcta  | gattcctgct | tccccaatgt | agtgtgggta | tcttgtaggg  | 2640 |
| tatgtggttg  | atgccagggc  | gtgctccagg | cacctcttcc | tgaagtctct | gcatttgag   | 2700 |
| attcgtggag  | aacctattta  | agcccaattt | taactgaaag | ccagtgagtc | tgatatggaa  | 2760 |
| gggaatgtaa  | aatttgcctg  | acttcttaag | aacaaaaccc | ccagctctgt | gccccatgct  | 2820 |
| ccttggggct  | tgccaccac   | tcctttgctg | tcagaggtag | aggagctggg | agagtccagg  | 2880 |
| agctagggac  | acagagggag  | actatggacc | aaggtgtgtg | tgtctggagg | aaccactgcc  | 2940 |
| cacccaccca  | ccccggggtc  | tctggggaac | tgtcaacctg | cccacgggac | atgtacattt  | 3000 |
| ccccttttgt  | gctggaagtg  | tgagtgcac  | ttgctggggg | tgagggtgg  | gacacatgag  | 3060 |
| gatgtataag  | tacagatttt  | aaaaaaggaa | atcaacttac | acttcttggc | tcttgtttta  | 3120 |
| aacagtgggtg | agtcctgtg   | tgggccgact | tgctaaagg  | cacacacgcg | ccgggtggag  | 3180 |
| cacgagagac  | ctcgtggcag  | catgtgatct | ggaaggcagg | caggacgggg | gcgttgggga  | 3240 |
| gccaagtca   | actctggggc  | tctggagcta | tagtgacttt | tggtctagaa | gggaccttg   | 3300 |
| tggtctgtgc  | ttcagccatt  | tgagggcag  | gggcatcatt | aattcagacg | ttaaagattct | 3360 |
| atgaatatgg  | actggccaaa  | agttatcctt | actccatctg | tgaaagaagt | ttgctaaagc  | 3420 |
| aaatcatgat  | atgaacaaaa  | attacagggg | acctgtttta | gagaacaaaa | tgttccaagc  | 3480 |

## EX05-004patentin.txt

```

actttaggca gacaccagct gtttgcaaac aatgtgctaa tatgcaaag atgtgcttat 3540
taaaggaggc ccatggggcc tcttattggc aatacttggc tgtgggttac attaaatatg 3600
tgaacatagt atgaagtagc atcatttttag ggttattctg ttacttaggg tttttgtttt 3660
ctgttttttt tttctctttt tttgtattta ccgtgctagt tctcttctac acctactctg 3720
tctctcaagc catttttgcca ctgcttccc tgccatctgg cccttccctt tgtctcagtg 3780
ggatagatgg attgtgaaat ggaatctccc agaaccctg ccctggcagc ctggaagacc 3840
gtgcctgccc agccctcgtc accacagga ctccttgggg cctggcagtg catgtgccag 3900
caggcaggac aaactctgtg tacctgtgcc caggatgaatg ggcgcagggt cctcttgccc 3960
tgtcctgcgg ggggccccac gagttcctgg cattcagcac tgcttagcat tctcggaagg 4020
tttcttcaac tgcttgcttt tcccaggctt gccttttagtg tcatgtaaga catttttaag 4080
ttatatattat tttgttgggt tttaaaattg cacagaacac taagaccgaa aggctggact 4140
cttgtttctc cttgaaagct ttgcctttgt tttgaacttc ctttcccact tggtagaaag 4200
agcccagaag cagccctggc cctgtaagat ggactctttc atccttcagt tgtatttagc 4260
tttgagtttc tctgcatctg tccaccccat gtgtatataa cccagcccct ggctctgggg 4320
tggtcacctc gtcagtgcct tttgttctgg aggagaggac ccccccgcct gccgagaggc 4380
tctcttctg ttctgcaccc ctctcccat gggaccttg agaaaactga actgttataa 4440
accctgcac agtgccctgtc aaacagatgc aaaccttcct gaataaagcc ttggagacgg 4500
aatc 4505

```

```

<210> 5
<211> 3010
<212> DNA
<213> Homo sapiens

```

```

<400> 5
cctctttttt gtcttccata gcttgtgaga aaataatttc tgagcatttt tactttttaa 60
gccatctcgt ccctacgagg tttgcgcctc tgggcatgta gtctacacag gacctgagaa 120
tctgagaaac tgcagccgca cggttgttta tggagctttg ggcgggggct gagcccgagg 180
tcgtgcccc agcccgtgc ccaggccatg ccgccccatc tgcgcgcgga gccgcggctg 240
ccgggcctcc ggggctgagc cgggagcgcc gggaggagga ggcgcccgcg gcggagcagg 300
agcgggagcc gcggcgggcg gcagcgggg acccagtact atggctgtgt actgctatgc 360
gctcaatagc ctggtgatca tgaatagcgc caacgagatg aagagcggcg gcggcccggg 420
gcccagtggc agcgagacgc cccgcccc gaggagggca gtgctgagcc ccggcagcgt 480
tttcagcccc gggagaggcg cctctttcct cttcccccca gccgagtcgc tgtccccga 540
ggagccccgg agccccgggg gctggcgagg cggccggcgc aggctgaata gtagcagcgg 600
cagtggcagc ggcagcagcg gcagtagcgt gagcagccca agttgggctg gtcgcctgcg 660
aggggaccgg cagcaggtgg tggcagccgg taccctctcc ccgccagggc cggaggaggc 720
caagaggaag ctgcggatct tgcagcgcga gttgcagaac gtgcaggtga accagaaagt 780

```



## EX05-004patentin.txt

|            |            |            |             |            |            |      |
|------------|------------|------------|-------------|------------|------------|------|
| gggcatgttt | gaggcgcaca | tccaggcaca | gagctccgcc  | attcaagcgc | ccgcagccc  | 840  |
| gcgtttgggc | agggtcact  | cgccctcccc | gtgccccttc  | cgcagcagca | gtcagcccc  | 900  |
| tggaagggtc | ctggttcagg | gcgcccggag | cgaggaacgg  | aggacaaagt | cctgggggga | 960  |
| gcaatgtcca | gagacttcag | gaaccgactc | cgggaggaaa  | ggagggccca | gcctatgctc | 1020 |
| ctcgcaggtg | aagaaaggaa | tgccacctct | tcccggcccg  | gctgccccta | caggatcaga | 1080 |
| ggctcaggg  | ccatccgctt | ttgtaaggat | ggagaaggg   | atccctgcca | gtccccgctg | 1140 |
| tggctcacc  | acagctatgg | aaattgacaa | aaggggctct  | cctaccccgg | gaactcggag | 1200 |
| ctgcctagct | ccctcattgg | ggctgttcgg | agctagctta  | acgatggcca | cggaagtggc | 1260 |
| agcgagagtt | acatccactg | ggccacaccg | tccacaggat  | cttgccctca | ctgagccgtc | 1320 |
| tgggagagcc | cgtgagcttg | aggacctgca | gccccagag   | gccctggtgg | agaggcaggg | 1380 |
| gcagtttctg | ggcagtgaga | caagcccagc | cccagaaagg  | ggcgggccc  | gcgatggaga | 1440 |
| acccctggg  | aagatgggga | aaggatatct | gccctgtggc  | atgccgggct | ctggggagcc | 1500 |
| tgaagtgggc | aaaaggccag | aggagacgac | tgtgagcgtg  | caaagcgcag | agtcctctga | 1560 |
| tgccctgagc | tggtccaggc | tgcccagggc | cctggcctcc  | gtaggccctg | aggaggccc  | 1620 |
| aagtggggcc | cccgtgggcg | gggggcgttg | gcagctctcc  | gacagagtgg | agggagggtc | 1680 |
| cccaacgctg | ggcttgcttg | ggggcagccc | ctcagcacag  | ccggggaccg | ggaatgtgga | 1740 |
| ggcgggaatt | ccttctggca | gaatgctgga | gcctttgccc  | tggtgggacg | ctgcgaaaga | 1800 |
| tctgaaagaa | cctcagtgcc | ctcctgggga | caggggtggg  | gtgcagcctg | ggaactccag | 1860 |
| ggtttggcag | ggcaccatgg | agaaagccgg | tttggcttg   | acgcgtggca | caggggtgca | 1920 |
| atcagagggg | acttgggaaa | gccagcggca | ggacagtgat  | gccctcccaa | gtccggagct | 1980 |
| gctaccccaa | gatcaggaca | agcctttcct | gaggaaggcc  | tgacgcccc  | gcaacatacc | 2040 |
| tgctgtcatc | attacagaca | tgggcaccca | ggaggatggg  | gccttgagg  | agacgcaggg | 2100 |
| aagccctcgg | ggcaacctgc | ccctgaggaa | actgtcctct  | tcctcggcct | cctccacggg | 2160 |
| cttctcctca | tcctacgaag | actcagagga | ggacatctcc  | agtgaccctg | agcgcaccct | 2220 |
| ggaccccaac | tcagccttcc | tgcataccct | ggaccagcag  | aaacctagag | tgtgacttct | 2280 |
| tgggaagtgt | ttccctcagt | ggtactgctg | gggcaacgtc  | caataccaag | aatgatgtat | 2340 |
| agcatatttc | atcttcctac | actactctct | ggaaagactg  | agccaattac | ggggtcatct | 2400 |
| gtaaagtcta | agtgtgcag  | tttccctacg | accattggat  | tttgtttgta | gtttgatatt | 2460 |
| gtcttactgt | cccttgaagt | tgtaatttgt | aattcttttag | ttttcaagag | ggactctaca | 2520 |
| tgtttccttg | tgatgatggc | cttgagttac | tcatgtgtac  | actgcctatt | tatccccatt | 2580 |
| gagccccac  | tgcccgaaca | tgttgatggc | attttatata  | gtaagctgtc | agttacttaa | 2640 |
| tgtacaaata | ttcttccatt | ccatgttttt | ctcttaaaat  | tttactttat | tggccaggcg | 2700 |
| cagtggctca | catctgtaat | cccagcactt | taggaggcca  | aggcgggagg | atcacctgag | 2760 |
| gtcaagagat | tgagaccagc | ctggccaaca | tggtgaaacc  | ccgtctctac | taaaaaatac | 2820 |

EX05-004patentin.txt

```

aaaaattagc caggtgtagt ggtgggcacc tgtaatccca gctacttggg aggctgaggc 2880
aggagaattg cttgaacctg agaggcggag gttgcggtga gccgagatag caccactgca 2940
ctccagcctg ggcgaaagag ctaaactcca tctcaaaaat aaataaataa ataaaaaaaa 3000
aaaaaaaaaa 3010

```

```

<210> 6
<211> 3398
<212> PRT
<213> Homo sapiens
<400> 6

```

```

Gly Gly Gly Thr Cys Gly Gly Cys Cys Gly Ala Ala Gly Cys Cys Cys
1      5      10      15

```

```

Gly Ala Ala Cys Cys Gly Ala Ala Gly Gly Ala Gly Cys Gly Gly Gly
20      25      30

```

```

Cys Ala Thr Gly Ala Gly Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly
35      40      45

```

```

Thr Gly Cys Cys Gly Thr Gly Gly Gly Ala Gly Cys Cys Thr Gly Ala
50      55      60

```

```

Ala Cys Gly Ala Gly Gly Cys Gly Gly Ala Gly Gly Cys Cys Gly Gly
65      70      75      80

```

```

Gly Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly Cys Gly Gly Cys Gly
85      90      95

```

```

Gly Cys Cys Cys Gly Cys Ala Thr Gly Gly Gly Ala Cys Thr Gly Gly
100     105     110

```

```

Ala Gly Gly Cys Gly Cys Cys Gly Cys Gly Ala Gly Gly Ala Gly Gly
115     120     125

```

```

Gly Cys Gly Gly Cys Gly Gly Cys Gly Gly Cys Ala Gly Cys Cys Gly
130     135     140

```

```

Gly Gly Ala Cys Ala Gly Cys Ala Gly Cys Gly Ala Cys Cys Thr Gly
145     150     155     160

```

```

Gly Gly Cys Cys Cys Gly Gly Cys Gly Cys Ala Gly Gly Gly Gly Cys
165     170     175

```

```

Cys Cys Cys Gly Gly Cys Gly Gly Gly Gly Cys Gly Gly Cys Cys Gly
180     185     190

```

```

Gly Ala Gly Gly Gly Gly Gly Gly Cys Gly Gly Gly Cys Cys Cys Thr
195     200     205

```

## EX05-004patentin.txt

Gly Gly Gly Cys Cys Cys Gly Gly Ala Cys Ala Gly Ala Gly Gly Gly  
 210 215 220  
 Gly Thr Cys Cys Ala Gly Cys Cys Thr Cys Cys Ala Cys Ala Gly Cys  
 225 230 235 240  
 Gly Ala Gly Cys Cys Thr Gly Ala Gly Ala Gly Gly Gly Cys Cys Gly  
 245 250 255  
 Gly Cys Cys Thr Cys Gly Gly Gly Cys Cys Thr Gly Cys Gly Cys Cys  
 260 265 270  
 Gly Gly Gly Gly Ala Cys Ala Gly Ala Gly Ala Gly Thr Cys Cys Gly  
 275 280 285  
 Cys Ala Gly Gly Cys Ala Gly Ala Ala Thr Thr Cys Thr Gly Gly Ala  
 290 295 300  
 Cys Ala Gly Ala Cys Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Ala  
 305 310 315 320  
 Gly Cys Cys Cys Gly Cys Gly Gly Cys Ala Gly Cys Thr Gly Gly Cys  
 325 330 335  
 Cys Thr Thr Gly Gly Ala Gly Thr Ala Gly Ala Gly Ala Cys Cys Gly  
 340 345 350  
 Ala Gly Ala Gly Gly Cys Cys Cys Ala Ala Gly Cys Ala Ala Ala Ala  
 355 360 365  
 Gly Ala Cys Gly Gly Ala Gly Cys Cys Ala Gly Ala Cys Ala Gly Gly  
 370 375 380  
 Thr Cys Cys Ala Gly Cys Cys Thr Cys Cys Gly Gly Ala Cys Gly Cys  
 385 390 395 400  
 Ala Thr Cys Thr Ala Gly Ala Ala Thr Gly Gly Ala Gly Cys Thr Gly  
 405 410 415  
 Gly Thr Cys Ala Gly Ala Gly Cys Thr Gly Gly Ala Gly Ala Cys Gly  
 420 425 430  
 Ala Cys Thr Thr Gly Thr Cys Thr Thr Thr Gly Gly Ala Cys Gly Gly  
 435 440 445  
 Ala Gly Ala Cys Cys Gly Gly Gly Ala Cys Ala Gly Ala Thr Gly Gly  
 450 455 460  
 Cys Cys Thr Thr Thr Gly Gly Ala Cys Thr Gly Ala Thr Cys Cys Gly  
 465 470 475 480

## EX05-004patentin.txt

cys Ala cys Ala Gly Gly Thr cys cys Gly Ala cys cys Thr cys cys  
 485 490 495  
 Ala Gly Thr Thr Thr cys Ala Gly cys cys cys Gly Ala Gly Gly Ala  
 500 505 510  
 Gly Gly cys cys Ala Gly cys cys cys cys Thr Gly Gly Ala cys Ala  
 515 520 525  
 cys Ala Gly cys cys Ala Gly Gly Gly Gly Thr Thr cys Ala Thr Gly  
 530 535 540  
 Gly Gly cys cys cys Thr Gly Gly Ala cys Ala Gly Ala Gly cys Thr  
 545 550 555 560  
 Gly Gly Ala Ala Ala cys Gly cys Ala Thr Gly Gly Gly Thr cys Ala  
 565 570 575  
 cys Ala Gly Ala cys Thr cys Ala Gly cys cys Ala Gly Ala Gly Ala  
 580 585 590  
 Gly Gly Gly Thr cys Ala Ala Gly Thr cys cys Thr Gly Gly Gly cys  
 595 600 605  
 Thr Gly Ala Thr Ala Ala cys cys Thr cys Thr Gly Gly Ala cys cys  
 610 615 620  
 cys Ala cys cys Ala Gly Ala Ala cys Ala Gly Thr Thr cys cys Ala  
 625 630 635 640  
 Gly cys cys Thr cys cys Ala Gly Ala cys Thr cys Ala cys cys cys  
 645 650 655  
 Ala Gly Ala Ala Gly Gly Ala Gly cys cys Thr Gly Thr cys cys cys  
 660 665 670  
 Thr cys Ala Ala Ala Ala Gly Ala Gly cys cys Ala Ala Gly Thr Gly  
 675 680 685  
 cys Thr Gly Ala Thr Gly Gly cys Thr cys cys Thr Gly Gly Ala Ala  
 690 695 700  
 Ala Gly Ala Ala Thr Thr Gly Thr Ala Thr Ala cys Thr Gly Ala Thr  
 705 710 715 720  
 Gly Gly cys Thr cys cys Ala Gly Gly Ala cys Ala cys Ala Ala cys  
 725 730 735  
 Ala Gly Gly Ala Thr Ala Thr Thr Gly Ala Ala Gly Gly Thr cys cys  
 740 745 750

EX05-004patentin.txt

Cys Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Cys Ala Thr Ala Thr  
 755 760 765  
 Ala Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Cys Ala Gly Ala  
 770 775 780  
 Ala Ala Ala Ala Ala Cys Ala Gly Gly Ala Thr Ala Cys Thr Gly Ala  
 785 790 795 800  
 Ala Gly Cys Ala Gly Cys Cys Ala Gly Gly Ala Ala Ala Cys Ala Gly  
 805 810 815  
 Cys Cys Thr Gly Gly Cys Ala Cys Thr Gly Gly Thr Gly Gly Thr Thr  
 820 825 830  
 Thr Cys Cys Ala Ala Ala Thr Ala Cys Ala Ala Cys Ala Gly Gly Ala  
 835 840 845  
 Thr Ala Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly  
 850 855 860  
 Ala Cys Ala Cys Ala Ala Cys Cys Thr Ala Gly Cys Ala Cys Thr Gly  
 865 870 875 880  
 Ala Cys Gly Gly Thr Thr Cys Cys Cys Ala Gly Ala Cys Ala Gly Cys  
 885 890 895  
 Ala Cys Cys Thr Gly Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Cys  
 900 905 910  
 Cys Thr Cys Thr Thr Gly Gly Gly Ala Gly Ala Gly Cys Cys Thr Gly  
 915 920 925  
 Ala Gly Gly Ala Thr Gly Gly Cys Cys Cys Ala Thr Thr Ala Gly Ala  
 930 935 940  
 Gly Gly Ala Ala Cys Cys Ala Gly Ala Gly Cys Cys Thr Gly Gly Ala  
 945 950 955 960  
 Gly Ala Ala Thr Thr Gly Cys Thr Gly Ala Cys Thr Cys Ala Cys Cys  
 965 970 975  
 Thr Gly Thr Ala Cys Thr Cys Thr Cys Ala Cys Cys Thr Gly Ala Ala  
 980 985 990  
 Gly Thr Gly Thr Ala Gly Cys Cys Cys Cys Cys Thr Gly Thr Gly Cys  
 995 1000 1005  
 Cys Cys Thr Gly Thr Gly Cys Cys Cys Cys Gly Cys Cys Thr Cys  
 1010 1015 1020

EX05-004patentin.txt

Ala Thr Cys Ala Thr Thr Ala Cys Cys Cys Cys Thr Gly Ala Gly  
 1025 1030 1035  
 Ala Cys Cys Cys Cys Thr Gly Ala Gly Cys Cys Thr Gly Ala Gly  
 1040 1045 1050  
 Gly Cys Cys Cys Ala Gly Cys Cys Ala Gly Thr Gly Gly Ala  
 1055 1060 1065  
 Cys Cys Cys Cys Cys Thr Cys Cys Cys Gly Gly Gly Thr Thr  
 1070 1075 1080  
 Gly Ala Gly Gly Gly Gly Gly Cys Ala Gly Cys Gly Gly Cys  
 1085 1090 1095  
 Gly Gly Cys Thr Thr Cys Thr Cys Cys Thr Cys Thr Gly Cys Cys  
 1100 1105 1110  
 Thr Cys Thr Thr Cys Thr Thr Thr Cys Gly Ala Cys Gly Ala Gly  
 1115 1120 1125  
 Thr Cys Thr Gly Ala Gly Gly Ala Thr Gly Ala Cys Gly Thr Gly  
 1130 1135 1140  
 Gly Thr Gly Gly Cys Cys Gly Gly Gly Gly Cys Gly Gly Ala  
 1145 1150 1155  
 Gly Gly Thr Gly Cys Cys Ala Gly Cys Gly Ala Thr Cys Cys Cys  
 1160 1165 1170  
 Gly Ala Gly Gly Ala Cys Ala Gly Gly Thr Cys Thr Gly Gly Gly  
 1175 1180 1185  
 Ala Gly Cys Ala Ala Ala Cys Cys Cys Thr Gly Gly Ala Ala Gly  
 1190 1195 1200  
 Ala Ala Gly Cys Thr Gly Ala Ala Gly Ala Cys Ala Gly Thr Thr  
 1205 1210 1215  
 Cys Thr Gly Ala Ala Gly Thr Ala Thr Thr Cys Ala Cys Cys Cys  
 1220 1225 1230  
 Thr Thr Thr Gly Thr Gly Gly Thr Cys Thr Cys Cys Thr Thr Cys  
 1235 1240 1245  
 Cys Gly Ala Ala Ala Ala Cys Ala Cys Thr Ala Cys Cys Cys Thr  
 1250 1255 1260  
 Thr Gly Gly Gly Thr Cys Cys Ala Gly Cys Thr Thr Thr Cys Thr  
 1265 1270 1275

## EX05-004patentin.txt

Gly Gly Ala Cys Ala Thr Gly Cys Thr Gly Gly Gly Ala Ala Cys  
 1280 1285 1290  
 Thr Thr Cys Cys Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Gly  
 1295 1300 1305  
 Gly Ala Thr Gly Gly Thr Cys Gly Gly Ala Thr Thr Cys Thr Gly  
 1310 1315 1320  
 Ala Ala Ala Cys Gly Thr Thr Thr Cys Thr Gly Thr Cys Ala Gly  
 1325 1330 1335  
 Thr Gly Thr Gly Ala Gly Cys Ala Gly Cys Gly Cys Ala Gly Cys  
 1340 1345 1350  
 Cys Thr Gly Gly Ala Gly Cys Ala Gly Cys Thr Gly Ala Thr Gly  
 1355 1360 1365  
 Ala Ala Ala Gly Ala Cys Cys Cys Gly Cys Thr Gly Cys Gly Ala  
 1370 1375 1380  
 Cys Cys Thr Thr Thr Cys Gly Thr Gly Cys Cys Thr Gly Cys Cys  
 1385 1390 1395  
 Thr Ala Cys Thr Ala Thr Gly Gly Cys Ala Thr Gly Gly Thr Gly  
 1400 1405 1410  
 Cys Thr Gly Cys Ala Gly Gly Ala Thr Gly Gly Cys Cys Ala Gly  
 1415 1420 1425  
 Ala Cys Cys Thr Thr Cys Ala Ala Cys Cys Ala Gly Ala Thr Gly  
 1430 1435 1440  
 Gly Ala Ala Gly Ala Cys Cys Thr Cys Cys Thr Gly Gly Cys Thr  
 1445 1450 1455  
 Gly Ala Cys Thr Thr Thr Gly Ala Gly Gly Gly Cys Cys Cys Cys  
 1460 1465 1470  
 Thr Cys Cys Ala Thr Thr Ala Thr Gly Gly Ala Cys Thr Gly Cys  
 1475 1480 1485  
 Ala Ala Gly Ala Thr Gly Gly Gly Cys Ala Gly Cys Ala Gly Gly  
 1490 1495 1500  
 Ala Cys Cys Thr Ala Thr Cys Thr Gly Gly Ala Ala Gly Ala Gly  
 1505 1510 1515  
 Gly Ala Gly Cys Thr Ala Gly Thr Gly Ala Ala Gly Gly Cys Ala  
 1520 1525 1530

EX05-004patentin.txt

Cys Gly Gly Gly Ala Ala Cys Gly Thr Cys Cys Cys Cys Gly Thr  
 1535 1540 1545  
 Cys Cys Cys Cys Gly Gly Ala Ala Gly Gly Ala Cys Ala Thr Gly  
 1550 1555 1560  
 Thr Ala Thr Gly Ala Gly Ala Gly Ala Thr Gly Gly Thr Gly  
 1565 1570 1575  
 Gly Cys Thr Gly Thr Gly Gly Ala Cys Cys Cys Thr Gly Gly Gly  
 1580 1585 1590  
 Gly Cys Cys Cys Cys Thr Ala Cys Cys Cys Cys Thr Gly Ala Gly  
 1595 1600 1605  
 Gly Ala Gly Cys Ala Thr Gly Cys Cys Cys Ala Gly Gly Gly Thr  
 1610 1615 1620  
 Gly Cys Ala Gly Thr Cys Ala Cys Cys Ala Ala Gly Cys Cys Cys  
 1625 1630 1635  
 Cys Gly Cys Thr Ala Cys Ala Thr Gly Cys Ala Gly Thr Gly Gly  
 1640 1645 1650  
 Ala Gly Gly Gly Ala Ala Ala Cys Cys Ala Thr Gly Ala Gly Cys  
 1655 1660 1665  
 Thr Cys Cys Ala Cys Cys Thr Cys Thr Ala Cys Cys Cys Thr Gly  
 1670 1675 1680  
 Gly Gly Cys Thr Thr Cys Cys Gly Gly Ala Thr Cys Gly Ala Gly  
 1685 1690 1695  
 Gly Gly Cys Ala Thr Cys Ala Ala Gly Ala Ala Gly Cys Ala  
 1700 1705 1710  
 Gly Ala Thr Gly Gly Gly Ala Cys Cys Thr Gly Thr Ala Ala Cys  
 1715 1720 1725  
 Ala Cys Cys Ala Ala Cys Thr Thr Cys Ala Ala Gly Ala Ala Gly  
 1730 1735 1740  
 Ala Cys Gly Cys Ala Gly Gly Cys Ala Cys Thr Gly Gly Ala Gly  
 1745 1750 1755  
 Cys Ala Gly Gly Thr Gly Ala Cys Ala Ala Ala Ala Gly Thr Gly  
 1760 1765 1770  
 Cys Thr Gly Gly Ala Gly Gly Ala Cys Thr Thr Cys Gly Thr Gly  
 1775 1780 1785



EX05-004patentin.txt

Gly Ala Thr Gly Gly Ala Gly Ala Cys Cys Ala Cys Gly Thr Cys  
 1790 1795 1800  
 Ala Thr Cys Cys Thr Gly Cys Ala Ala Ala Ala Gly Thr Ala Cys  
 1805 1810 1815  
 Gly Thr Gly Gly Cys Ala Thr Gly Cys Cys Thr Ala Gly Ala Ala  
 1820 1825 1830  
 Gly Ala Ala Cys Thr Thr Cys Gly Thr Gly Ala Ala Gly Cys Thr  
 1835 1840 1845  
 Cys Thr Gly Gly Ala Gly Ala Thr Cys Thr Cys Cys Cys Cys  
 1850 1855 1860  
 Thr Thr Cys Thr Thr Cys Ala Ala Gly Ala Cys Cys Cys Ala Cys  
 1865 1870 1875  
 Gly Ala Gly Gly Thr Gly Gly Thr Ala Gly Gly Cys Ala Gly Cys  
 1880 1885 1890  
 Thr Cys Cys Cys Thr Cys Cys Thr Cys Thr Thr Cys Gly Thr Gly  
 1895 1900 1905  
 Cys Ala Cys Gly Ala Cys Cys Ala Cys Ala Cys Cys Gly Gly Cys  
 1910 1915 1920  
 Cys Thr Gly Gly Cys Cys Ala Ala Gly Gly Thr Cys Thr Gly Gly  
 1925 1930 1935  
 Ala Thr Gly Ala Thr Ala Gly Ala Cys Thr Thr Cys Gly Gly Cys  
 1940 1945 1950  
 Ala Ala Gly Ala Cys Gly Gly Thr Gly Gly Cys Cys Thr Thr Gly  
 1955 1960 1965  
 Cys Cys Cys Gly Ala Cys Cys Ala Cys Cys Ala Gly Ala Cys Gly  
 1970 1975 1980  
 Cys Thr Cys Ala Gly Cys Cys Ala Cys Ala Gly Gly Cys Thr Gly  
 1985 1990 1995  
 Cys Cys Cys Thr Gly Gly Gly Cys Thr Gly Ala Gly Gly Gly Cys  
 2000 2005 2010  
 Ala Ala Cys Cys Gly Thr Gly Ala Gly Gly Ala Cys Gly Gly Cys  
 2015 2020 2025  
 Thr Ala Cys Cys Thr Cys Thr Gly Gly Gly Gly Cys Cys Thr Gly  
 2030 2035 2040

EX05-004patentin.txt

Gly Ala Cys Ala Ala Cys Ala Thr Gly Ala Thr Cys Thr Gly Cys  
 2045 2050 2055  
 cys Thr Cys Cys Thr Gly Cys Ala Gly Gly Gly Gly Cys Thr Gly  
 2060 2065 2070  
 Gly Cys Ala Cys Ala Gly Ala Gly Cys Thr Gly Ala Gly Cys Thr  
 2075 2080 2085  
 Gly Cys Thr Cys Ala Gly Cys Cys Ala Cys Cys Ala Thr Cys Ala  
 2090 2095 2100  
 Gly Gly Thr Thr Ala Ala Thr Thr Gly Gly Ala Thr Gly Gly Cys  
 2105 2110 2115  
 Gly Cys Cys Ala Gly Thr Cys Thr Gly Gly Cys Thr Gly Gly Ala  
 2120 2125 2130  
 Gly Gly Ala Gly Cys Cys Cys Thr Gly Ala Gly Ala Thr Gly Cys  
 2135 2140 2145  
 Cys Ala Thr Gly Gly Gly Ala Gly Gly Cys Cys Thr Gly Ala Gly  
 2150 2155 2160  
 Gly Thr Thr Gly Gly Cys Cys Ala Cys Gly Gly Gly Gly Gly Ala  
 2165 2170 2175  
 Gly Cys Thr Gly Gly Cys Cys Thr Cys Cys Ala Gly Gly Gly Ala  
 2180 2185 2190  
 Cys Gly Gly Gly Ala Gly Ala Gly Ala Thr Thr Gly Thr Gly Thr  
 2195 2200 2205  
 Cys Ala Thr Gly Thr Gly Cys Cys Ala Cys Ala Cys Gly Ala Gly  
 2210 2215 2220  
 Ala Cys Cys Ala Ala Cys Gly Thr Gly Gly Ala Ala Ala Ala Gly  
 2225 2230 2235  
 Thr Cys Thr Gly Ala Ala Gly Gly Gly Cys Cys Thr Thr Gly Gly  
 2240 2245 2250  
 Gly Ala Gly Ala Cys Cys Ala Gly Gly Thr Ala Gly Cys Ala Cys  
 2255 2260 2265  
 Cys Thr Gly Gly Cys Cys Cys Cys Ala Thr Cys Ala Thr Gly Ala  
 2270 2275 2280  
 Thr Gly Cys Ala Gly Gly Gly Gly Thr Thr Thr Thr Thr Gly Gly Gly  
 2285 2290 2295

## EX05-004patentin.txt

Gly Ala Cys Cys Thr Gly Gly Ala Ala Gly Gly Ala Ala Gly Gly  
 2300 2305 2310  
 Thr Gly Ala Thr Gly Ala Gly Gly Cys Ala Gly Thr Gly Ala Gly  
 2315 2320 2325  
 Thr Cys Ala Gly Ala Ala Ala Ala Ala Cys Cys Ala Gly Ala Ala  
 2330 2335 2340  
 Cys Gly Gly Gly Thr Cys Cys Cys Gly Gly Ala Thr Cys  
 2345 2350 2355  
 Thr Gly Cys Cys Gly Gly Gly Ala Ala Gly Gly Cys Thr Thr Cys  
 2360 2365 2370  
 Thr Gly Ala Gly Gly Gly Gly Cys Thr Gly Cys Cys Cys Thr Gly  
 2375 2380 2385  
 Ala Gly Ala Gly Cys Ala Thr Thr Cys Ala Gly Thr Thr Cys Ala  
 2390 2395 2400  
 Cys Ala Thr Gly Thr Cys Ala Cys Ala Gly Gly Gly Thr Ala Thr  
 2405 2410 2415  
 Gly Gly Thr Gly Thr Gly Ala Cys Ala Gly Gly Gly Thr Gly Cys  
 2420 2425 2430  
 Cys Thr Gly Thr Gly Gly Ala Cys Ala Cys Ala Thr Gly Ala Ala  
 2435 2440 2445  
 Thr Cys Ala Cys Thr Thr Cys Thr Ala Ala Cys Cys Thr Gly Cys  
 2450 2455 2460  
 Cys Thr Cys Cys Cys Thr Gly Thr Cys Ala Gly Cys Cys Thr Cys  
 2465 2470 2475  
 Cys Ala Gly Gly Cys Thr Gly Cys Cys Ala Gly Cys Thr Gly Gly  
 2480 2485 2490  
 Cys Thr Gly Ala Gly Gly Cys Cys Ala Gly Gly Gly Ala Cys Thr  
 2495 2500 2505  
 Gly Gly Gly Thr Cys Ala Gly Gly Cys Thr Cys Ala Thr Cys Thr  
 2510 2515 2520  
 Gly Thr Gly Gly Cys Gly Cys Cys Thr Cys Ala Gly Ala Gly Gly  
 2525 2530 2535  
 Gly Thr Cys Ala Gly Cys Ala Thr Cys Ala Thr Thr Gly Gly Thr  
 2540 2545 2550

## EX05-004patentin.txt

Gly Ala Ala Cys Ala Gly Ala Thr Gly Cys Ala Gly Gly Cys Gly  
 2555 2560 2565  
 Cys Thr Gly Cys Thr Gly Gly Ala Cys Cys Ala Thr Cys Thr Gly  
 2570 2575 2580  
 Gly Gly Gly Ala Gly Ala Gly Thr Gly Ala Cys Ala Gly Thr Cys  
 2585 2590 2595  
 Cys Ala Thr Gly Thr Cys Thr Thr Cys Ala Cys Cys Ala Gly Gly  
 2600 2605 2610  
 Gly Ala Gly Cys Cys Ala Thr Thr Thr Gly Ala Gly Thr Gly Cys  
 2615 2620 2625  
 Thr Gly Ala Gly Cys Gly Ala Cys Ala Ala Gly Ala Gly Gly Cys  
 2630 2635 2640  
 Thr Cys Ala Gly Ala Gly Gly Gly Cys Ala Thr Gly Ala Cys Cys  
 2645 2650 2655  
 Cys Cys Ala Thr Gly Gly Gly Ala Cys Thr Gly Gly Ala Thr Gly  
 2660 2665 2670  
 Cys Gly Gly Cys Cys Thr Gly Ala Gly Gly Gly Cys Thr Gly Ala  
 2675 2680 2685  
 Thr Ala Cys Cys Gly Cys Thr Gly Gly Gly Cys Gly Thr Ala  
 2690 2695 2700  
 Thr Cys Cys Thr Gly Cys Cys Cys Thr Gly Cys Thr Gly Thr Gly  
 2705 2710 2715  
 Gly Cys Cys Cys Thr Gly Thr Gly Gly Gly Ala Thr Cys Cys Thr  
 2720 2725 2730  
 Cys Cys Gly Thr Gly Thr Thr Cys Cys Thr Cys Gly Gly Cys Gly  
 2735 2740 2745  
 Gly Ala Cys Thr Cys Thr Gly Cys Thr Gly Ala Cys Cys Thr Cys  
 2750 2755 2760  
 Cys Thr Gly Cys Ala Gly Ala Cys Cys Cys Ala Ala Ala Cys Cys  
 2765 2770 2775  
 Ala Cys Ala Gly Cys Cys Ala Cys Ala Thr Cys Cys Cys Ala Gly  
 2780 2785 2790  
 Cys Thr Thr Cys Thr Gly Thr Gly Cys Cys Ala Gly Cys Ala Cys  
 2795 2800 2805

## EX05-004patentin.txt

Thr Gly Thr Gly Ala Cys Ala Gly Thr Ala Cys Cys Thr Cys Gly  
 2810 2815 2820  
 Cys Thr Cys Cys Thr Cys Thr Gly Thr Gly Cys Ala Cys Cys Ala  
 2825 2830 2835  
 Gly Ala Thr Cys Cys Gly Gly Cys Cys Thr Cys Ala Gly Gly Ala  
 2840 2845 2850  
 Cys Thr Thr Ala Cys Ala Cys Cys Thr Cys Cys Thr Gly Cys Cys  
 2855 2860 2865  
 Thr Gly Ala Cys Cys Cys Cys Cys Ala Gly Gly Cys Thr Thr Cys  
 2870 2875 2880  
 Thr Cys Thr Cys Thr Cys Cys Thr Thr Thr Cys Thr Cys Cys Cys  
 2885 2890 2895  
 Ala Gly Cys Ala Ala Ala Cys Thr Gly Cys Ala Gly Thr Gly Gly  
 2900 2905 2910  
 Cys Ala Gly Ala Ala Ala Gly Gly Ala Gly Gly Thr Thr Cys Ala  
 2915 2920 2925  
 Gly Ala Gly Gly Cys Thr Gly Gly Gly Ala Ala Ala Gly Thr Gly  
 2930 2935 2940  
 Gly Gly Cys Cys Thr Cys Cys Cys Cys Thr Thr Gly Cys Ala Ala  
 2945 2950 2955  
 Cys Thr Cys Ala Gly Ala Gly Cys Thr Gly Cys Thr Gly Cys Ala  
 2960 2965 2970  
 Cys Thr Cys Ala Gly Gly Ala Gly Gly Gly Cys Cys Cys Ala  
 2975 2980 2985  
 Thr Cys Cys Ala Ala Thr Cys Cys Cys Gly Gly Gly Cys Cys Cys  
 2990 2995 3000  
 Cys Thr Gly Cys Ala Gly Gly Gly Ala Ala Ala Ala Gly Cys Gly  
 3005 3010 3015  
 Cys Thr Gly Gly Gly Thr Gly Thr Gly Thr Gly Thr Cys Ala Gly  
 3020 3025 3030  
 Ala Gly Gly Cys Gly Cys Ala Gly Gly Gly Thr Gly Gly Thr  
 3035 3040 3045  
 Gly Gly Gly Gly Cys Thr Gly Cys Cys Ala Gly Cys Cys Ala Gly  
 3050 3055 3060

## EX05-004patentin.txt

Gly Ala Cys Cys Cys Thr Gly Gly Cys Cys Thr Gly Cys Ala Gly  
 3065 3070 3075  
 Cys Cys Thr Gly Ala Thr Cys Cys Ala Ala Ala Cys Cys Ala Ala  
 3080 3085 3090  
 Ala Gly Ala Cys Thr Gly Thr Ala Gly Ala Ala Cys Cys Cys Thr  
 3095 3100 3105  
 Gly Gly Gly Gly Thr Gly Thr Gly Gly Cys Thr Ala Ala Cys Gly  
 3110 3115 3120  
 Gly Cys Cys Cys Cys Thr Cys Cys Ala Gly Cys Ala Cys Cys Cys  
 3125 3130 3135  
 Ala Thr Ala Gly Cys Cys Ala Gly Gly Thr Cys Thr Thr Cys Cys  
 3140 3145 3150  
 Thr Gly Gly Cys Cys Cys Thr Thr Gly Ala Gly Gly Cys Thr Gly  
 3155 3160 3165  
 Gly Gly Cys Thr Gly Gly Cys Gly Gly Ala Cys Ala Gly Gly Cys  
 3170 3175 3180  
 Ala Cys Cys Thr Ala Cys Cys Thr Cys Thr Thr Thr Cys Thr Thr  
 3185 3190 3195  
 Ala Ala Gly Cys Thr Gly Ala Ala Gly Cys Thr Cys Cys Ala  
 3200 3205 3210  
 Cys Ala Cys Thr Gly Thr Cys Thr Thr Cys Cys Ala Gly Gly Gly  
 3215 3220 3225  
 Cys Thr Gly Ala Gly Gly Ala Gly Ala Thr Gly Cys Thr Cys Thr  
 3230 3235 3240  
 Cys Cys Thr Thr Thr Thr Cys Thr Ala Cys Thr Gly Ala Cys Cys  
 3245 3250 3255  
 Ala Thr Cys Thr Thr Gly Ala Thr Ala Cys Thr Thr Ala Thr Thr  
 3260 3265 3270  
 Thr Ala Thr Ala Cys Gly Ala Gly Ala Gly Gly Cys Ala Gly Thr  
 3275 3280 3285  
 Thr Gly Cys Thr Gly Gly Ala Cys Gly Gly Gly Gly Thr Ala Gly  
 3290 3295 3300  
 Thr Ala Cys Thr Gly Gly Gly Ala Ala Gly Cys Ala Gly Gly Ala  
 3305 3310 3315

EX05-004patentin.txt

Gly Gly Cys Ala Gly Ala Ala Thr Gly Gly Cys Thr Cys Thr Gly  
 3320 3325 3330

Cys Thr Gly Ala Gly Cys Cys Thr Cys Cys Thr Ala Cys Cys Cys  
 3335 3340 3345

Ala Thr Gly Ala Cys Ala Ala Cys Ala Cys Cys Cys Cys Ala Ala  
 3350 3355 3360

Thr Ala Ala Ala Cys Ala Gly Ala Ala Cys Ala Thr Thr Cys Ala  
 3365 3370 3375

Gly Ala Gly Cys Cys Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala  
 3380 3385 3390

Ala Ala Ala Ala Ala  
 3395

<210> 7  
 <211> 2052  
 <212> PRT  
 <213> Homo sapiens

<400> 7

Ala Thr Gly Ala Gly Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly Thr  
 1 5 10 15

Gly Cys Cys Gly Thr Gly Gly Gly Ala Gly Cys Cys Thr Gly Ala Ala  
 20 25 30

Cys Gly Ala Gly Gly Cys Gly Gly Ala Gly Gly Cys Cys Gly Gly Gly  
 35 40 45

Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly Cys Gly Gly Cys Gly Gly  
 50 55 60

Cys Cys Cys Gly Cys Ala Thr Gly Gly Gly Ala Cys Thr Gly Gly Ala  
 65 70 75 80

Gly Gly Cys Gly Cys Cys Gly Cys Gly Ala Gly Gly Ala Gly Gly Gly  
 85 90 95

Cys Gly Gly Cys Gly Gly Cys Gly Gly Cys Ala Gly Cys Cys Gly Gly  
 100 105 110

Gly Ala Cys Ala Gly Cys Ala Gly Cys Gly Ala Cys Cys Thr Gly Gly  
 115 120 125

Gly Cys Cys Cys Gly Gly Cys Gly Cys Ala Gly Gly Gly Gly Cys Cys  
 130 135 140

EX05-004patentin.txt

Cys Cys Gly Gly Cys Gly Gly Gly Gly Cys Gly Gly Cys Cys Gly Gly  
 145 150 155 160  
 Ala Gly Gly Gly Gly Gly Gly Cys Gly Gly Gly Cys Cys Cys Thr Gly  
 165 170 175  
 Gly Gly Cys Cys Cys Gly Gly Ala Cys Ala Gly Ala Gly Gly Gly Gly  
 180 185 190  
 Thr Cys Cys Ala Gly Cys Cys Thr Cys Cys Ala Cys Ala Gly Cys Gly  
 195 200 205  
 Ala Gly Cys Cys Thr Gly Ala Gly Ala Gly Gly Gly Cys Cys Gly Gly  
 210 215 220  
 Cys Cys Thr Cys Gly Gly Gly Cys Cys Thr Gly Cys Gly Cys Cys Gly  
 225 230 235 240  
 Gly Gly Gly Ala Cys Ala Gly Ala Gly Ala Gly Thr Cys Cys Gly Cys  
 245 250 255  
 Ala Gly Gly Cys Ala Gly Ala Ala Thr Thr Cys Thr Gly Gly Ala Cys  
 260 265 270  
 Ala Gly Ala Cys Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Ala Gly  
 275 280 285  
 Cys Cys Cys Gly Cys Gly Gly Cys Ala Gly Cys Thr Gly Gly Cys Cys  
 290 295 300  
 Thr Thr Gly Gly Ala Gly Thr Ala Gly Ala Gly Ala Cys Cys Gly Ala  
 305 310 315 320  
 Gly Ala Gly Gly Cys Cys Cys Ala Ala Gly Cys Ala Ala Ala Ala Gly  
 325 330 335  
 Ala Cys Gly Gly Ala Gly Cys Cys Ala Gly Ala Cys Ala Gly Gly Thr  
 340 345 350  
 Cys Cys Ala Gly Cys Cys Thr Cys Cys Gly Gly Ala Cys Gly Cys Ala  
 355 360 365  
 Thr Cys Thr Ala Gly Ala Ala Thr Gly Gly Ala Gly Cys Thr Gly Gly  
 370 375 380  
 Thr Cys Ala Gly Ala Gly Cys Thr Gly Gly Ala Gly Ala Cys Gly Ala  
 385 390 395 400  
 Cys Thr Thr Gly Thr Cys Thr Thr Thr Gly Gly Ala Cys Gly Gly Ala  
 405 410 415



EX05-004patentin.txt

Gly Ala Cys Cys Gly Gly Gly Ala Cys Ala Gly Ala Thr Gly Gly Cys  
 420 425 430  
 Cys Thr Thr Thr Gly Gly Ala Cys Thr Gly Ala Thr Cys Cys Gly Cys  
 435 440 445  
 Ala Cys Ala Gly Gly Thr Cys Cys Gly Ala Cys Cys Thr Cys Cys Ala  
 450 455 460  
 Gly Thr Thr Thr Cys Ala Gly Cys Cys Cys Gly Ala Gly Gly Ala Gly  
 465 470 475 480  
 Gly Cys Cys Ala Gly Cys Cys Cys Cys Thr Gly Gly Ala Cys Ala Cys  
 485 490 495  
 Ala Gly Cys Cys Ala Gly Gly Gly Gly Thr Thr Cys Ala Thr Gly Gly  
 500 505 510  
 Gly Cys Cys Cys Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Thr Gly  
 515 520 525  
 Gly Ala Ala Ala Cys Gly Cys Ala Thr Gly Gly Gly Thr Cys Ala Cys  
 530 535 540  
 Ala Gly Ala Cys Thr Cys Ala Gly Cys Cys Ala Gly Ala Gly Ala Gly  
 545 550 555 560  
 Gly Gly Thr Cys Ala Ala Gly Thr Cys Cys Thr Gly Gly Gly Cys Thr  
 565 570 575  
 Gly Ala Thr Ala Ala Cys Cys Thr Cys Thr Gly Gly Ala Cys Cys Cys  
 580 585 590  
 Ala Cys Cys Ala Gly Ala Ala Cys Ala Gly Thr Thr Cys Cys Ala Gly  
 595 600 605  
 Cys Cys Thr Cys Cys Ala Gly Ala Cys Thr Cys Ala Cys Cys Cys Ala  
 610 615 620  
 Gly Ala Ala Gly Gly Ala Gly Cys Cys Thr Gly Thr Cys Cys Cys Thr  
 625 630 635 640  
 Cys Ala Ala Ala Ala Gly Ala Gly Cys Cys Ala Ala Gly Thr Gly Cys  
 645 650 655  
 Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly Ala Ala Ala  
 660 665 670  
 Gly Ala Ala Thr Thr Gly Thr Ala Thr Ala Cys Thr Gly Ala Thr Gly  
 675 680 685

EX05-004patentin.txt

Gly Cys Thr Cys Cys Ala Gly Gly Ala Cys Ala Cys Ala Ala Cys Ala  
 690 695 700

Gly Gly Ala Thr Ala Thr Thr Gly Ala Ala Gly Gly Thr Cys Cys Cys  
 705 710 715 720

Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Cys Ala Thr Ala Thr Ala  
 725 730 735

Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Cys Ala Gly Ala Ala  
 740 745 750

Ala Ala Ala Ala Cys Ala Gly Gly Ala Thr Ala Cys Thr Gly Ala Ala  
 755 760 765

Gly Cys Ala Gly Cys Cys Ala Gly Gly Ala Ala Ala Cys Ala Gly Cys  
 770 775 780

Cys Thr Gly Gly Cys Ala Cys Thr Gly Gly Thr Gly Gly Thr Thr Thr  
 785 790 795 800

Cys Cys Ala Ala Ala Thr Ala Cys Ala Ala Cys Ala Gly Gly Ala Thr  
 805 810 815

Ala Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly Ala  
 820 825 830

Cys Ala Cys Ala Ala Cys Cys Thr Ala Gly Cys Ala Cys Thr Gly Ala  
 835 840 845

Cys Gly Gly Thr Thr Cys Cys Cys Ala Gly Ala Cys Ala Gly Cys Ala  
 850 855 860

Cys Cys Thr Gly Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Cys Cys  
 865 870 875 880

Thr Cys Thr Thr Gly Gly Gly Ala Gly Ala Gly Cys Cys Thr Gly Ala  
 885 890 895

Gly Gly Ala Thr Gly Gly Cys Cys Cys Ala Thr Thr Ala Gly Ala Gly  
 900 905 910

Gly Ala Ala Cys Cys Ala Gly Ala Gly Cys Cys Thr Gly Gly Ala Gly  
 915 920 925

Ala Ala Thr Thr Gly Cys Thr Gly Ala Cys Thr Cys Ala Cys Cys Thr  
 930 935 940

Gly Thr Ala Cys Thr Cys Thr Cys Ala Cys Cys Thr Gly Ala Ala Gly  
 945 950 955 960

Gly Thr Gly Gly Thr Cys Thr Cys Cys Thr Thr Cys Cys Gly Ala  
1205 1210 1215

EX05-004patentin.txt

|     |      |     |     |     |     |      |     |     |     |     |      |     |     |     |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ala | Ala  | Ala | Cys | Ala | Cys | Thr  | Ala | Cys | Cys | Cys | Thr  | Thr | Gly | Gly |
|     | 1220 |     |     |     |     | 1225 |     |     |     |     | 1230 |     |     |     |
| Gly | Thr  | Cys | Cys | Ala | Gly | Cys  | Thr | Thr | Thr | Cys | Thr  | Gly | Gly | Ala |
|     | 1235 |     |     |     |     | 1240 |     |     |     |     | 1245 |     |     |     |
| Cys | Ala  | Thr | Gly | Cys | Thr | Gly  | Gly | Gly | Ala | Ala | Cys  | Thr | Thr | Cys |
|     | 1250 |     |     |     |     | 1255 |     |     |     |     | 1260 |     |     |     |
| Cys | Ala  | Gly | Gly | Cys | Ala | Gly  | Gly | Ala | Gly | Ala | Gly  | Gly | Ala | Thr |
|     | 1265 |     |     |     |     | 1270 |     |     |     |     | 1275 |     |     |     |
| Gly | Gly  | Thr | Cys | Gly | Gly | Ala  | Thr | Thr | Cys | Thr | Gly  | Ala | Ala | Ala |
|     | 1280 |     |     |     |     | 1285 |     |     |     |     | 1290 |     |     |     |
| Cys | Gly  | Thr | Thr | Thr | Cys | Thr  | Gly | Thr | Cys | Ala | Gly  | Thr | Gly | Thr |
|     | 1295 |     |     |     |     | 1300 |     |     |     |     | 1305 |     |     |     |
| Gly | Ala  | Gly | Cys | Ala | Gly | Cys  | Gly | Cys | Ala | Gly | Cys  | Cys | Thr | Gly |
|     | 1310 |     |     |     |     | 1315 |     |     |     |     | 1320 |     |     |     |
| Gly | Ala  | Gly | Cys | Ala | Gly | Cys  | Thr | Gly | Ala | Thr | Gly  | Ala | Ala | Ala |
|     | 1325 |     |     |     |     | 1330 |     |     |     |     | 1335 |     |     |     |
| Gly | Ala  | Cys | Cys | Cys | Gly | Cys  | Thr | Gly | Cys | Gly | Ala  | Cys | Cys | Thr |
|     | 1340 |     |     |     |     | 1345 |     |     |     |     | 1350 |     |     |     |
| Thr | Thr  | Cys | Gly | Thr | Gly | Cys  | Cys | Thr | Gly | Cys | Cys  | Thr | Ala | Cys |
|     | 1355 |     |     |     |     | 1360 |     |     |     |     | 1365 |     |     |     |
| Thr | Ala  | Thr | Gly | Gly | Cys | Ala  | Thr | Gly | Gly | Thr | Gly  | Cys | Thr | Gly |
|     | 1370 |     |     |     |     | 1375 |     |     |     |     | 1380 |     |     |     |
| Cys | Ala  | Gly | Gly | Ala | Thr | Gly  | Gly | Cys | Cys | Ala | Gly  | Ala | Cys | Cys |
|     | 1385 |     |     |     |     | 1390 |     |     |     |     | 1395 |     |     |     |
| Thr | Thr  | Cys | Ala | Ala | Cys | Cys  | Ala | Gly | Ala | Thr | Gly  | Gly | Ala | Ala |
|     | 1400 |     |     |     |     | 1405 |     |     |     |     | 1410 |     |     |     |
| Gly | Ala  | Cys | Cys | Thr | Cys | Cys  | Thr | Gly | Gly | Cys | Thr  | Gly | Ala | Cys |
|     | 1415 |     |     |     |     | 1420 |     |     |     |     | 1425 |     |     |     |
| Thr | Thr  | Thr | Gly | Ala | Gly | Gly  | Gly | Cys | Cys | Cys | Cys  | Thr | Cys | Cys |
|     | 1430 |     |     |     |     | 1435 |     |     |     |     | 1440 |     |     |     |
| Ala | Thr  | Thr | Ala | Thr | Gly | Gly  | Ala | Cys | Thr | Gly | Cys  | Ala | Ala | Gly |
|     | 1445 |     |     |     |     | 1450 |     |     |     |     | 1455 |     |     |     |
| Ala | Thr  | Gly | Gly | Gly | Cys | Ala  | Gly | Cys | Ala | Gly | Gly  | Ala | Cys | Cys |
|     | 1460 |     |     |     |     | 1465 |     |     |     |     | 1470 |     |     |     |

EX05-004patentin.txt

|     |      |     |     |     |     |      |      |     |     |      |      |     |     |     |
|-----|------|-----|-----|-----|-----|------|------|-----|-----|------|------|-----|-----|-----|
| Thr | Ala  | Thr | Cys | Thr | Gly | Gly  | Ala  | Ala | Gly | Ala  | Gly  | Gly | Ala | Gly |
|     | 1475 |     |     |     |     |      | 1480 |     |     |      | 1485 |     |     |     |
| Cys | Thr  | Ala | Gly | Thr | Gly | Ala  | Ala  | Gly | Gly | Cys  | Ala  | Cys | Gly | Gly |
|     | 1490 |     |     |     |     | 1495 |      |     |     |      | 1500 |     |     |     |
| Gly | Ala  | Ala | Cys | Gly | Thr | Cys  | Cys  | Cys | Gly | Thr  | Cys  | Cys | Cys |     |
|     | 1505 |     |     |     |     | 1510 |      |     |     | 1515 |      |     |     |     |
| Cys | Gly  | Gly | Ala | Ala | Gly | Gly  | Ala  | Cys | Ala | Thr  | Gly  | Thr | Ala | Thr |
|     | 1520 |     |     |     |     | 1525 |      |     |     |      | 1530 |     |     |     |
| Gly | Ala  | Gly | Ala | Ala | Gly | Ala  | Thr  | Gly | Gly | Thr  | Gly  | Gly | Cys | Thr |
|     | 1535 |     |     |     |     | 1540 |      |     |     | 1545 |      |     |     |     |
| Gly | Thr  | Gly | Gly | Ala | Cys | Cys  | Cys  | Thr | Gly | Gly  | Gly  | Gly | Cys | Cys |
|     | 1550 |     |     |     |     | 1555 |      |     |     |      | 1560 |     |     |     |
| Cys | Cys  | Thr | Ala | Cys | Cys | Cys  | Cys  | Thr | Gly | Ala  | Gly  | Gly | Ala | Gly |
|     | 1565 |     |     |     |     | 1570 |      |     |     |      | 1575 |     |     |     |
| Cys | Ala  | Thr | Gly | Cys | Cys | Cys  | Ala  | Gly | Gly | Gly  | Thr  | Gly | Cys | Ala |
|     | 1580 |     |     |     |     | 1585 |      |     |     |      | 1590 |     |     |     |
| Gly | Thr  | Cys | Ala | Cys | Cys | Ala  | Ala  | Gly | Cys | Cys  | Cys  | Cys | Gly | Cys |
|     | 1595 |     |     |     |     | 1600 |      |     |     |      | 1605 |     |     |     |
| Thr | Ala  | Cys | Ala | Thr | Gly | Cys  | Ala  | Gly | Thr | Gly  | Gly  | Ala | Gly | Gly |
|     | 1610 |     |     |     |     | 1615 |      |     |     |      | 1620 |     |     |     |
| Gly | Ala  | Ala | Ala | Cys | Cys | Ala  | Thr  | Gly | Ala | Gly  | Cys  | Thr | Cys | Cys |
|     | 1625 |     |     |     |     | 1630 |      |     |     |      | 1635 |     |     |     |
| Ala | Cys  | Cys | Thr | Cys | Thr | Ala  | Cys  | Cys | Cys | Thr  | Gly  | Gly | Gly | Cys |
|     | 1640 |     |     |     |     | 1645 |      |     |     |      | 1650 |     |     |     |
| Thr | Thr  | Cys | Cys | Gly | Gly | Ala  | Thr  | Cys | Gly | Ala  | Gly  | Gly | Gly | Cys |
|     | 1655 |     |     |     |     | 1660 |      |     |     |      | 1665 |     |     |     |
| Ala | Thr  | Cys | Ala | Ala | Gly | Ala  | Ala  | Gly | Gly | Cys  | Ala  | Gly | Ala | Thr |
|     | 1670 |     |     |     |     | 1675 |      |     |     |      | 1680 |     |     |     |
| Gly | Gly  | Gly | Ala | Cys | Cys | Thr  | Gly  | Thr | Ala | Ala  | Cys  | Ala | Cys | Cys |
|     | 1685 |     |     |     |     | 1690 |      |     |     |      | 1695 |     |     |     |
| Ala | Ala  | Cys | Thr | Thr | Cys | Ala  | Ala  | Gly | Ala | Ala  | Gly  | Ala | Cys | Gly |
|     | 1700 |     |     |     |     | 1705 |      |     |     |      | 1710 |     |     |     |
| Cys | Ala  | Gly | Gly | Cys | Ala | Cys  | Thr  | Gly | Gly | Ala  | Gly  | Cys | Ala | Gly |
|     | 1715 |     |     |     |     | 1720 |      |     |     |      | 1725 |     |     |     |

EX05-004patentin.txt

|     |      |     |     |     |     |      |      |     |     |     |      |      |     |     |
|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|------|------|-----|-----|
| Gly | Thr  | Gly | Ala | Cys | Ala | Ala  | Ala  | Ala | Gly | Thr | Gly  | Cys  | Thr | Gly |
|     | 1730 |     |     |     |     |      | 1735 |     |     |     |      | 1740 |     |     |
| Gly | Ala  | Gly | Gly | Ala | Cys | Thr  | Thr  | Cys | Gly | Thr | Gly  | Gly  | Ala | Thr |
|     | 1745 |     |     |     |     | 1750 |      |     |     |     | 1755 |      |     |     |
| Gly | Gly  | Ala | Gly | Ala | Cys | Cys  | Ala  | Cys | Gly | Thr | Cys  | Ala  | Thr | Cys |
|     | 1760 |     |     |     |     | 1765 |      |     |     |     | 1770 |      |     |     |
| Cys | Thr  | Gly | Cys | Ala | Ala | Ala  | Ala  | Gly | Thr | Ala | Cys  | Gly  | Thr | Gly |
|     | 1775 |     |     |     |     | 1780 |      |     |     |     | 1785 |      |     |     |
| Gly | Cys  | Ala | Thr | Gly | Cys | Cys  | Thr  | Ala | Gly | Ala | Ala  | Gly  | Ala | Ala |
|     | 1790 |     |     |     |     | 1795 |      |     |     |     | 1800 |      |     |     |
| Cys | Thr  | Thr | Cys | Gly | Thr | Gly  | Ala  | Ala | Gly | Cys | Thr  | Cys  | Thr | Gly |
|     | 1805 |     |     |     |     | 1810 |      |     |     |     | 1815 |      |     |     |
| Gly | Ala  | Gly | Ala | Thr | Cys | Thr  | Cys  | Cys | Cys | Cys | Cys  | Thr  | Thr | Cys |
|     | 1820 |     |     |     |     | 1825 |      |     |     |     | 1830 |      |     |     |
| Thr | Thr  | Cys | Ala | Ala | Gly | Ala  | Cys  | Cys | Cys | Ala | Cys  | Gly  | Ala | Gly |
|     | 1835 |     |     |     |     | 1840 |      |     |     |     | 1845 |      |     |     |
| Gly | Thr  | Gly | Gly | Thr | Ala | Gly  | Gly  | Cys | Ala | Gly | Cys  | Thr  | Cys | Cys |
|     | 1850 |     |     |     |     | 1855 |      |     |     |     | 1860 |      |     |     |
| Cys | Thr  | Cys | Cys | Thr | Cys | Thr  | Thr  | Cys | Gly | Thr | Gly  | Cys  | Ala | Cys |
|     | 1865 |     |     |     |     | 1870 |      |     |     |     | 1875 |      |     |     |
| Gly | Ala  | Cys | Cys | Ala | Cys | Ala  | Cys  | Cys | Gly | Gly | Cys  | Cys  | Thr | Gly |
|     | 1880 |     |     |     |     | 1885 |      |     |     |     | 1890 |      |     |     |
| Gly | Cys  | Cys | Ala | Ala | Gly | Gly  | Thr  | Cys | Thr | Gly | Gly  | Ala  | Thr | Gly |
|     | 1895 |     |     |     |     | 1900 |      |     |     |     | 1905 |      |     |     |
| Ala | Thr  | Ala | Gly | Ala | Cys | Thr  | Thr  | Cys | Gly | Gly | Cys  | Ala  | Ala | Gly |
|     | 1910 |     |     |     |     | 1915 |      |     |     |     | 1920 |      |     |     |
| Ala | Cys  | Gly | Gly | Thr | Gly | Gly  | Cys  | Cys | Thr | Thr | Gly  | Cys  | Cys | Cys |
|     | 1925 |     |     |     |     | 1930 |      |     |     |     | 1935 |      |     |     |
| Gly | Ala  | Cys | Cys | Ala | Cys | Cys  | Ala  | Gly | Ala | Cys | Gly  | Cys  | Thr | Cys |
|     | 1940 |     |     |     |     | 1945 |      |     |     |     | 1950 |      |     |     |
| Ala | Gly  | Cys | Cys | Ala | Cys | Ala  | Gly  | Gly | Cys | Thr | Gly  | Cys  | Cys | Cys |
|     | 1955 |     |     |     |     | 1960 |      |     |     |     | 1965 |      |     |     |
| Thr | Gly  | Gly | Gly | Cys | Thr | Gly  | Ala  | Gly | Gly | Gly | Cys  | Ala  | Ala | Cys |
|     | 1970 |     |     |     |     | 1975 |      |     |     |     | 1980 |      |     |     |

EX05-004patentin.txt  
 Cys Gly Thr Gly Ala Gly Gly Ala Cys Gly Gly Cys Thr Ala Cys  
 1985 1990 1995

Cys Thr Cys Thr Gly Gly Gly Gly Cys Cys Thr Gly Gly Ala Cys  
 2000 2005 2010

Ala Ala Cys Ala Thr Gly Ala Thr Cys Thr Gly Cys Cys Thr Cys  
 2015 2020 2025

Cys Thr Gly Cys Ala Gly Gly Gly Gly Cys Thr Gly Gly Cys Ala  
 2030 2035 2040

Cys Ala Gly Ala Gly Cys Thr Gly Ala  
 2045 2050

<210> 8  
 <211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 8

Met Thr Leu Pro Gly Gly Pro Thr Gly Met Ala Arg Pro Gly Gly Ala  
 1 5 10 15

Arg Pro Cys Ser Pro Gly Leu Glu Arg Ala Pro Arg Arg Ser Val Gly  
 20 25 30

Glu Leu Arg Leu Leu Phe Glu Ala Arg Cys Ala Ala Val Ala Ala Ala  
 35 40 45

Ala Ala Ala Gly Glu Pro Arg Ala Arg Gly Ala Lys Arg Arg Gly Gly  
 50 55 60

Gln Val Pro Asn Gly Leu Pro Arg Ala Pro Pro Ala Pro Val Ile Pro  
 65 70 75 80

Gln Leu Thr Val Thr Ala Glu Glu Pro Asp Val Pro Pro Thr Ser Pro  
 85 90 95

Gly Pro Pro Glu Arg Glu Arg Asp Cys Leu Pro Ala Ala Gly Ser Ser  
 100 105 110

His Leu Gln Gln Pro Arg Arg Leu Ser Thr Ser Ser Val Ser Ser Thr  
 115 120 125

Gly Ser Ser Ser Leu Leu Glu Asp Ser Glu Asp Asp Leu Leu Ser Asp  
 130 135 140

Ser Glu Ser Arg Ser Arg Gly Asn Val Gln Leu Glu Ala Gly Glu Asp  
 145 150 155 160

Val Gly Gln Lys Asn His Trp Gln Lys Ile Arg Thr Met Val Asn Leu  
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165

170

175

Pro Val Ile Ser Pro Phe Lys Lys Arg Tyr Ala Trp Val Gln Leu Ala  
180 185 190

Gly His Thr Gly Ser Phe Lys Ala Ala Gly Thr Ser Gly Leu Ile Leu  
195 200 205

Lys Arg Cys Ser Glu Pro Glu Arg Tyr Cys Leu Ala Arg Leu Met Ala  
210 215 220

Asp Ala Leu Arg Gly Cys Val Pro Ala Phe His Gly Val Val Glu Arg  
225 230 235 240

Asp Gly Glu Ser Tyr Leu Gln Leu Gln Asp Leu Leu Asp Gly Phe Asp  
245 250 255

Gly Pro Cys Val Leu Asp Cys Lys Met Gly Val Arg Thr Tyr Leu Glu  
260 265 270

Glu Glu Leu Thr Lys Ala Arg Glu Arg Pro Lys Leu Arg Lys Asp Met  
275 280 285

Tyr Lys Lys Met Leu Ala Val Asp Pro Glu Ala Pro Thr Glu Glu Glu  
290 295 300

His Ala Gln Arg Ala Val Thr Lys Pro Arg Tyr Met Gln Trp Arg Glu  
305 310 315 320

Gly Ile Ser Ser Ser Thr Thr Leu Gly Phe Arg Ile Glu Gly Ile Lys  
325 330 335

Lys Ala Asp Gly Ser Cys Ser Thr Asp Phe Lys Thr Thr Arg Ser Arg  
340 345 350

Glu Gln Val Leu Arg Val Phe Glu Glu Phe Val Gln Gly Asp Glu Glu  
355 360 365

Val Leu Arg Arg Tyr Leu Asn Arg Leu Gln Gln Ile Arg Asp Thr Leu  
370 375 380

Glu Val Ser Glu Phe Phe Arg Arg His Glu Val Ile Gly Ser Ser Leu  
385 390 395 400

Leu Phe Val His Asp His Cys His Arg Ala Gly Val Trp Leu Ile Asp  
405 410 415

Phe Gly Lys Thr Thr Pro Leu Pro Asp Gly Gln Ile Leu Asp His Arg  
420 425 430

Arg Pro Trp Glu Glu Gly Asn Arg Glu Asp Gly Tyr Leu Leu Gly Leu  
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Leu Cys Ser Ser Gln Val Lys Lys Gly Met Pro Pro Leu Pro Gly Arg  
 225 230 235 240

Ala Ala Pro Thr Gly Ser Glu Ala Gln Gly Pro Ser Ala Phe Val Arg  
 245 250 255

Met Glu Lys Gly Ile Pro Ala Ser Pro Arg Cys Gly Ser Pro Thr Ala  
 260 265 270

Met Glu Ile Asp Lys Arg Gly Ser Pro Thr Pro Gly Thr Arg Ser Cys  
 275 280 285

Leu Ala Pro Ser Leu Gly Leu Phe Gly Ala Ser Leu Thr Met Ala Thr  
 290 295 300

Glu Val Ala Ala Arg Val Thr Ser Thr Gly Pro His Arg Pro Gln Asp  
 305 310 315 320

Leu Ala Leu Thr Glu Pro Ser Gly Arg Ala Arg Glu Leu Glu Asp Leu  
 325 330 335

Gln Pro Pro Glu Ala Leu Val Glu Arg Gln Gly Gln Phe Leu Gly Ser  
 340 345 350

Glu Thr Ser Pro Ala Pro Glu Arg Gly Gly Pro Arg Asp Gly Glu Pro  
 355 360 365

Pro Gly Lys Met Gly Lys Gly Tyr Leu Pro Cys Gly Met Pro Gly Ser  
 370 375 380

Gly Glu Pro Glu Val Gly Lys Arg Pro Glu Glu Thr Thr Val Ser Val  
 385 390 395 400

Gln Ser Ala Glu Ser Ser Asp Ser Leu Ser Trp Ser Arg Leu Pro Arg  
 405 410 415

Ala Leu Ala Ser Val Gly Pro Glu Glu Ala Arg Ser Gly Ala Pro Val  
 420 425 430

Gly Gly Gly Arg Trp Gln Leu Ser Asp Arg Val Glu Gly Gly Ser Pro  
 435 440 445

Thr Leu Gly Leu Leu Gly Gly Ser Pro Ser Ala Gln Pro Gly Thr Gly  
 450 455 460

Asn Val Glu Ala Gly Ile Pro Ser Gly Arg Met Leu Glu Pro Leu Pro  
 465 470 475 480

Cys Trp Asp Ala Ala Lys Asp Leu Lys Glu Pro Gln Cys Pro Pro Gly  
 485 490 495

## EX05-004patentin.txt

Asp Arg Val Gly Val Gln Pro Gly Asn Ser Arg Val Trp Gln Gly Thr  
 500 505 510  
 Met Glu Lys Ala Gly Leu Ala Trp Thr Arg Gly Thr Gly Val Gln Ser  
 515 520 525  
 Glu Gly Thr Trp Glu Ser Gln Arg Gln Asp Ser Asp Ala Leu Pro Ser  
 530 535 540  
 Pro Glu Leu Leu Pro Gln Asp Gln Asp Lys Pro Phe Leu Arg Lys Ala  
 545 550 555 560  
 Cys Ser Pro Ser Asn Ile Pro Ala Val Ile Ile Thr Asp Met Gly Thr  
 565 570 575  
 Gln Glu Asp Gly Ala Leu Glu Glu Thr Gln Gly Ser Pro Arg Gly Asn  
 580 585 590  
 Leu Pro Leu Arg Lys Leu Ser Ser Ser Ala Ser Ser Thr Gly Phe  
 595 600 605  
 Ser Ser Ser Tyr Glu Asp Ser Glu Glu Asp Ile Ser Ser Asp Pro Glu  
 610 615 620  
 Arg Thr Leu Asp Pro Asn Ser Ala Phe Leu His Thr Leu Asp Gln Gln  
 625 630 635 640  
 Lys Pro Arg Val Ser Lys Ser Trp Arg Lys Ile Lys Asn Met Val His  
 645 650 655  
 Trp Ser Pro Phe Val Met Ser Phe Lys Lys Lys Tyr Pro Trp Ile Gln  
 660 665 670  
 Leu Ala Gly His Ala Gly Ser Phe Lys Ala Ala Ala Asn Gly Arg Ile  
 675 680 685  
 Leu Lys Lys His Cys Glu Ser Glu Gln Arg Cys Leu Asp Arg Leu Met  
 690 695 700  
 Val Asp Val Leu Arg Pro Phe Val Pro Ala Tyr His Gly Asp Val Val  
 705 710 715 720  
 Lys Asp Gly Glu Arg Tyr Asn Gln Met Asp Asp Leu Leu Ala Asp Phe  
 725 730 735  
 Asp Ser Pro Cys Val Met Asp Cys Lys Met Gly Ile Arg Thr Tyr Leu  
 740 745 750  
 Glu Glu Glu Leu Thr Lys Ala Arg Lys Lys Pro Ser Leu Arg Lys Asp  
 755 760 765

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Met Tyr Gln Lys Met Ile Glu Val Asp Pro Glu Ala Pro Thr Glu Glu  
 770 775 780  
 Glu Lys Ala Gln Arg Ala Val Thr Lys Pro Arg Tyr Met Gln Trp Arg  
 785 790 795 800  
 Glu Thr Ile Ser Ser Thr Ala Thr Leu Gly Phe Arg Ile Glu Gly Ile  
 805 810 815  
 Lys Lys Glu Asp Gly Thr Val Asn Arg Asp Phe Lys Lys Thr Lys Thr  
 820 825 830  
 Arg Glu Gln Val Thr Glu Ala Phe Arg Glu Phe Thr Lys Gly Asn His  
 835 840 845  
 Asn Ile Leu Ile Ala Tyr Arg Asp Arg Leu Lys Ala Ile Arg Thr Thr  
 850 855 860  
 Leu Glu Val Ser Pro Phe Phe Lys Cys His Glu Val Ile Gly Ser Ser  
 865 870 875 880  
 Leu Leu Phe Ile His Asp Lys Lys Glu Gln Ala Lys Val Trp Met Ile  
 885 890 895  
 Asp Phe Gly Lys Thr Thr Pro Leu Pro Glu Gly Gln Thr Leu Gln His  
 900 905 910  
 Asp Val Pro Trp Gln Glu Gly Asn Arg Glu Asp Gly Tyr Leu Ser Gly  
 915 920 925  
 Leu Asn Asn Leu Val Asp Ile Leu Thr Glu Met Ser Gln Asp Ala Pro  
 930 935 940  
 Leu Ala  
 945

<210> 10  
 <211> 683  
 <212> PRT  
 <213> Homo sapiens  
 <400> 10

Met Arg Arg Cys Pro Cys Arg Gly Ser Leu Asn Glu Ala Glu Ala Gly  
 1 5 10 15  
 Ala Leu Pro Ala Ala Ala Arg Met Gly Leu Glu Ala Pro Arg Gly Gly  
 20 25 30  
 Arg Arg Arg Gln Pro Gly Gln Gln Arg Pro Gly Pro Gly Ala Gly Ala  
 35 40 45

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Pro Ala Gly Arg Pro Glu Gly Gly Gly Pro Trp Ala Arg Thr Glu Gly  
 50 55 60  
 Ser Ser Leu His Ser Glu Pro Glu Arg Ala Gly Leu Gly Pro Ala Pro  
 65 70 75 80  
 Gly Thr Glu Ser Pro Gln Ala Glu Phe Trp Thr Asp Gly Gln Thr Glu  
 85 90 95  
 Pro Ala Ala Ala Gly Leu Gly Val Glu Thr Glu Arg Pro Lys Gln Lys  
 100 105 110  
 Thr Glu Pro Asp Arg Ser Ser Leu Arg Thr His Leu Glu Trp Ser Trp  
 115 120 125  
 Ser Glu Leu Glu Thr Thr Cys Leu Trp Thr Glu Thr Gly Thr Asp Gly  
 130 135 140  
 Leu Trp Thr Asp Pro His Arg Ser Asp Leu Gln Phe Gln Pro Glu Glu  
 145 150 155 160  
 Ala Ser Pro Trp Thr Gln Pro Gly Val His Gly Pro Trp Thr Glu Leu  
 165 170 175  
 Glu Thr His Gly Ser Gln Thr Gln Pro Glu Arg Val Lys Ser Trp Ala  
 180 185 190  
 Asp Asn Leu Trp Thr His Gln Asn Ser Ser Ser Leu Gln Thr His Pro  
 195 200 205  
 Glu Gly Ala Cys Pro Ser Lys Glu Pro Ser Ala Asp Gly Ser Trp Lys  
 210 215 220  
 Glu Leu Tyr Thr Asp Gly Ser Arg Thr Gln Gln Asp Ile Glu Gly Pro  
 225 230 235 240  
 Trp Thr Glu Pro Tyr Thr Asp Gly Ser Gln Lys Lys Gln Asp Thr Glu  
 245 250 255  
 Ala Ala Arg Lys Gln Pro Gly Thr Gly Gly Phe Gln Ile Gln Gln Asp  
 260 265 270  
 Thr Asp Gly Ser Trp Thr Gln Pro Ser Thr Asp Gly Ser Gln Thr Ala  
 275 280 285  
 Pro Gly Thr Asp Cys Leu Leu Gly Glu Pro Glu Asp Gly Pro Leu Glu  
 290 295 300  
 Glu Pro Glu Pro Gly Glu Leu Leu Thr His Leu Tyr Ser His Leu Lys  
 305 310 315 320

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Cys Ser Pro Leu Cys<sub>325</sub> Pro Val Pro Arg Leu<sub>330</sub> Ile Ile Thr Pro Glu<sub>335</sub> Thr  
 Pro Glu Pro Glu<sub>340</sub> Ala Gln Pro Val Gly<sub>345</sub> Pro Pro Ser Arg Val<sub>350</sub> Glu Gly  
 Gly Ser Gly<sub>355</sub> Gly Phe Ser Ser Ala<sub>360</sub> Ser Ser Phe Asp Glu<sub>365</sub> Ser Glu Asp  
 Asp Val<sub>370</sub> Val Ala Gly Gly Gly<sub>375</sub> Gly Ala Ser Asp Pro<sub>380</sub> Glu Asp Arg Ser  
 Gly<sub>385</sub> Ser Lys Pro Trp Lys<sub>390</sub> Lys Leu Lys Thr Val<sub>395</sub> Leu Lys Tyr Ser Pro<sub>400</sub>  
 Phe Val Val Ser Phe<sub>405</sub> Arg Lys His Tyr Pro<sub>410</sub> Trp Val Gln Leu Ser<sub>415</sub> Gly  
 His Ala Gly Asn<sub>420</sub> Phe Gln Ala Gly Glu<sub>425</sub> Asp Gly Arg Ile Leu<sub>430</sub> Lys Arg  
 Phe Cys Gln<sub>435</sub> Cys Glu Gln Arg Ser<sub>440</sub> Leu Glu Gln Leu Met<sub>445</sub> Lys Asp Pro  
 Leu Arg<sub>450</sub> Pro Phe Val Pro Ala<sub>455</sub> Tyr Tyr Gly Met Val<sub>460</sub> Leu Gln Asp Gly  
 Gln Thr Phe Asn Gln Met<sub>470</sub> Glu Asp Leu Leu Ala<sub>475</sub> Asp Phe Glu Gly Pro<sub>480</sub>  
 Ser Ile Met Asp Cys<sub>485</sub> Lys Met Gly Ser Arg<sub>490</sub> Thr Tyr Leu Glu Glu<sub>495</sub> Glu  
 Leu Val Lys Ala<sub>500</sub> Arg Glu Arg Pro Arg<sub>505</sub> Pro Arg Lys Asp Met<sub>510</sub> Tyr Glu  
 Lys Met Val<sub>515</sub> Ala Val Asp Pro Gly<sub>520</sub> Ala Pro Thr Pro Glu<sub>525</sub> Glu His Ala  
 Gln Gly Ala Val Thr Lys Pro<sub>535</sub> Arg Tyr Met Gln Trp<sub>540</sub> Arg Glu Thr Met  
 Ser<sub>545</sub> Ser Thr Ser Thr Leu<sub>550</sub> Gly Phe Arg Ile Glu<sub>555</sub> Gly Ile Lys Lys Ala<sub>560</sub>  
 Asp Gly Thr Cys Asn<sub>565</sub> Thr Asn Phe Lys Lys<sub>570</sub> Thr Gln Ala Leu Glu<sub>575</sub> Gln  
 Val Thr Lys Val<sub>580</sub> Leu Glu Asp Phe Val<sub>585</sub> Asp Gly Asp His Val<sub>590</sub> Ile Leu

EX05-004patentin.txt

Gln Lys Tyr Val Ala Cys Leu Glu Glu Leu Arg Glu Ala Leu Glu Ile  
595 600 605

Ser Pro Phe Phe Lys Thr His Glu Val Val Gly Ser Ser Leu Leu Phe  
610 615 620

Val His Asp His Thr Gly Leu Ala Lys Val Trp Met Ile Asp Phe Gly  
625 630 635 640

Lys Thr Val Ala Leu Pro Asp His Gln Thr Leu Ser His Arg Leu Pro  
645 650 655

Trp Ala Glu Gly Asn Arg Glu Asp Gly Tyr Leu Trp Gly Leu Asp Asn  
660 665 670

Met Ile Cys Leu Leu Gln Gly Leu Ala Gln Ser  
675 680